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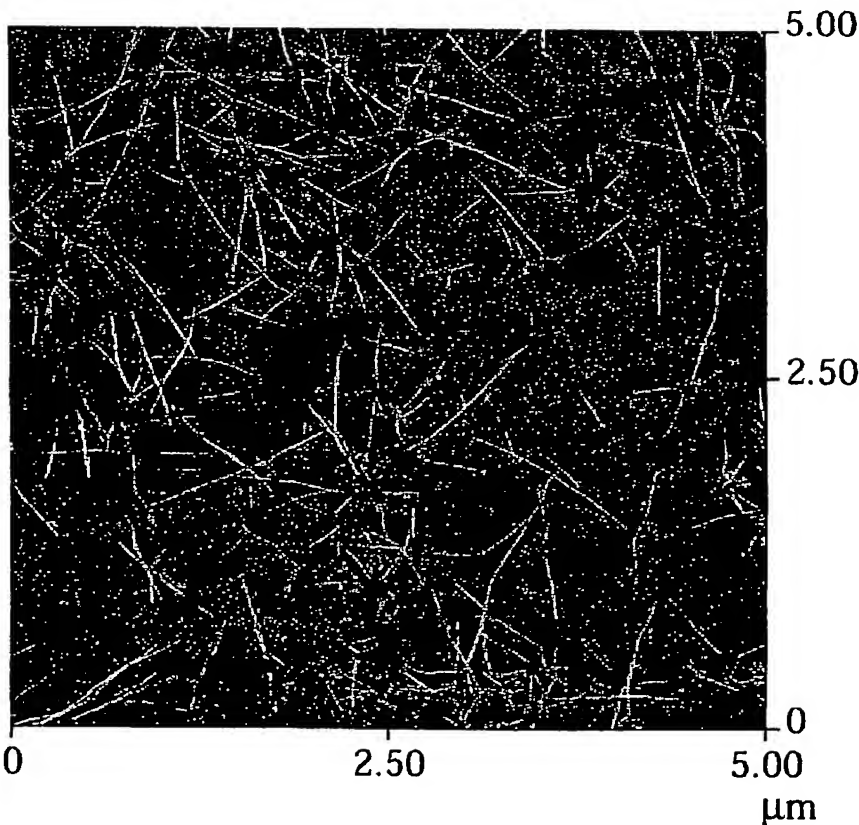
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TRUSTEES OF THE UNIVERSITY PENNSYLVANIA
[US/US]; 3160 Chestnut Street, Suite 200, Philadelphia,
PA 19104-6283 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): YODH, Arjun,
G. [US/US]; 231 Valley Road, Merion, PA 19066 (US).
ISLAM, Mohammad, F [BD/US]; 2020 Walnut Street,Apartment 21K, Philadelphia, PA 19103 (US). ALI,
Ahmed, M. Alsayed [EG/US]; 328 South 43rd Street -
Apartment No.2, Philadelphia, PA 19014 (US).(74) Agents: CALDWELL, John, W. et al.; Woodcock Wash-
burn LLP, One Liberty Place, 46th floor, Philadelphia, PA
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(54) Title: CARBON NANOTUBES: HIGH SOLIDS DISPERSIONS AND NEMATIC GELS THEREOF



(57) Abstract: Disclosed are high weight fraction carbon nanotube dispersions including an aqueous medium, carbon nanotubes, and at least one surfactant, the surfactant having an aromatic group, an alkyl group having from about 4 to about 30 carbon atoms, and a charged head group. Also disclosed are ultrasonication processes capable of providing stable dispersions of carbon nanotubes having reduced breakage of the carbon nanotubes. The preparation of nematic nanotube gels from the carbon nanotube dispersions are also disclosed. A variety of uses and applications of the carbon nanotube dispersions and nematic nanotube gels are provided.

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